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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,715	10/29/2003	Susumu Yamada	S008-P03194US	6461
33356	7590	12/16/2005	EXAMINER	
SoCAL IP LAW GROUP LLP 310 N. WESTLAKE BLVD. STE 120 WESTLAKE VILLAGE, CA 91362			FANTU, YALKEW	
			ART UNIT	PAPER NUMBER
			2838	

DATE MAILED: 12/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/696,715

Applicant(s)

YAMADA ET AL.

Examiner

Yalkew Fantu

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>02-18-2005</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: "AD In" in Fig.1 doesn't have corresponding description. Perhaps applicant intended to use as an AD input. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The disclosure is objected to because of the following informalities: On page 7 line 10 "FIG.5" appears wrong. There is no " a switching element Tr1 and a resistor R4 that are provided to the battery control circuit of FIG.5, and should be replaced with "FIG. 1". Also on page 11 line1, the variable description for the time period " $\square t$ " doesn't correspond to the one on the drawing. Applicant may replace with " $\Delta t$ ".

The word "inventions" on page 14 line 9 appears plural. Applicant may change to "invention".

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1-4, and 6, 7, 9, and 12 are rejected under 35 U.S.C. 102 (b) as being anticipated by Takahashi (US 6,134,391).

Takahashi discloses a battery control circuit (Fig. 1 20) having voltage detection section (Fig.1 30) "for detecting voltage of battery" (Col 1 line 45);

A resistor and a switching element connected in series (Fig.1 items 22, 24), being connected to battery in parallel (Fig.1 item 50).

A battery controlling section (Fig.1 item 10) relating to voltage of the battery (Col.1 line 45-46), and battery voltage detection section (Fig. 1 item 30), and battery controlling section (fig 1. item 10) " battery residual power checking is with a CPU (10)" (col. 4 line 32-33).

Voltage Recovery time measurement measuring a time period from the time when the switching element is turned OFF to a time the switching element is ON (Fig.1 item 24), (Col. 5 lines 23-27).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5, 8, 10, 11, 13, 14, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi (US 6,134,391) in view of Miyakawa et al. (US 5,912,544).

With respect to claim 5, 8, 10, 11, 13 and 14 HiroYuki teaches the claimed battery control circuit and residual capacity of the battery except a storing section for storing characteristic information related to residual capacity of the battery.

With respect to claim 15 and 16 Takahashi teaches the claimed battery operating power, and a resistor, component consuming power, but not a storing section for storing characteristic information.

Miyakawa et al. teaches, " a memory unit (Fig. 1 item 7) storing data related to discharged characteristics or data relating to a voltage range for display of remaining power of a battery (Fig. 1 item 10)" (col. 1 lines 35-37).

Miyakawa et al. and Takahashi are analogous art because they are from the same field of endeavor namely remaining (residual) battery capacity checking circuit.

At the time of the invention it would have been obvious to a person of ordinary skill in the art, to have added circuit elements: storing section for storing characteristic information to the control residual battery capacity detection of Hiroyuki in view of the teaching of Akihisa.

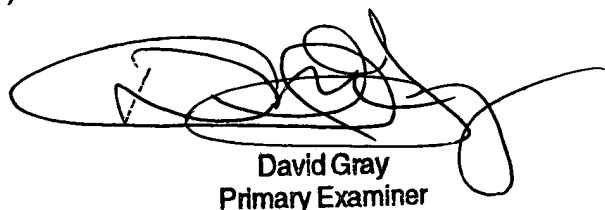
The suggestion or motivation for doing so would have been obvious in view of the teachings of Akihisa in col. 1 lines 35-36, and col.1 lines 41-42 that by adding a memory unit for storing data relating to the discharge characteristic or data relating to a voltage range for display of a remaining power of a battery to the battery control circuit.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yalkew Fantu whose telephone number is 571-272-8928. The examiner can normally be reached on (M-F);(8AM-5PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Gray can be reached on 571-272-2119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David Gray  
Primary Examiner